

[p.44a]

394 from him. Wicks are attached to nails in a wheellike frame and are then dipped repeatedly in liquid wax until the candles reach the desired thickness. The frame is suspended from the ceiling by a rope.

532 *Paper flowers.*—The women of one rather large household make paper flowers for funerals and paper ornaments for weddings. It was impossible to establish satisfactory contacts to learn details.

326 *Blacksmithing.*—Cherán has one reputed blacksmith. The individual concerned was never found at home, nor could any details concerning his techniques be learned.

256 *Baking.*—A baker of sweetened breads (*pan dulces*) established himself in Cherán in 1943. 438 He baked daily in a regular local oven belonging to one of the wealthier storekeepers. The bread was sold with the aid of a boy, who carried it about town in a big basket hat such as is used in Mestizo towns in the neighborhood. Information on sales was refused, but probably they were between \$10 and \$12 a day at three breads for 5 centavos. Expenses each day were 1 *arroba* (25 pounds) of flour, \$3.62; 1 kilo (2.2 pounds) of lard, \$1.50; 3 kilos of sugar, \$1.08; or a cash outlay of \$6.20, plus the labor of baker and vendor. This does not take into account the firewood for heating the oven. Profits evidently at best hardly justify the secrecy shown.

389 *Fireworks.*—At least one man in Cherán makes fireworks, both *cohetes* (explosive rockets) and *castillos* (set pieces built about a tall pole). The one man interviewed was born in Pichataro (which suggests he may be Mestizo in origin, although he apparently regards himself as a Tarascan) and learned the trade from his father.

Materials used in the manufacture of *cohetes* are niter, chlorate, sulfur, paper, agave fiber cord, and shakes. The worker interviewed makes *cohetes* only on order. He by no means supplies all the Cherán market.

Castillos likewise are made only on order. It is a general rule that *castillos* be bought outside the town, so the Cherán *cohetero* has never made a *castillo* for a Cherán fiesta. In 1940 he made *castillos* for San Felipe, Cheranástico, Ahuiran, and Pichataro.

Materials for *castillos* are necessarily quite

463 non-material things, such as "prayers" or *rezadores*, midwives, curers, and witches, are also left for consideration in other sections of this paper.

253 *Butchers.*—Except for *mayordomias* and large weddings, butchering of cattle and pigs is carried on by a group of specialists. Usually two butchers share a beef so the stock can be moved more rapidly. If the meat does not sell rapidly enough, part of it may be dried.

[347] All cattle are butchered at a "slaughter house," a stone-paved area with a ramada. The property is privately owned by Seferino Fabian, mayor of the town in 1940, but he made no charge for its use. A tax is charged of 5 pesos or more, depending on the size of the animal.

[651] Part of the tax goes into the municipal treasury and the balance is forwarded to the State treasury. Usually from four to nine animals a week are slaughtered.

When cheese is scarce in the market, the number of animals slaughtered is higher than at other times.

Pigs are slaughtered at the home of the butcher.

The principal skills involved are removing the hide in good condition (a considerable part of the profit is from the sale of the hide) and in selling the right proportions of the animal. Individual sales are usually small, and the portions are not weighed. The customer indicates the amount of money she has and presents a bowl. The butcher cuts off proper proportions of meat, bone, a bit of the lungs, and a bit of liver. There is rarely haggling over the amount; if the customer complains, the butcher may add a bit more. Or, if the customer is dissatisfied, she may go to another butcher.

[437] Shops are not open continuously. When a butcher's supply is exhausted, it may be several weeks before he butchers again. A red flag is hung in the street to advertise that meat is for sale.

256 *Nixtamal mills.*—Some seven or eight *nixtamal* mills in Cherán more than supply the demand. To prevent ruinous competition, the *municipio* has limited the number operating on any one day to half the number. As costs of operating the mill for a day are about the same regardless of the number of patrons, this

256 arrangement guarantees an adequate number of customers each day a mill is operating.

256 The miller must have some mechanical knowledge as well as capital and business ability.

462 Most of the mills are driven by an old automobile engine converted to operate on gas produced by a charcoal burner, usually made from an old oil drum. A belt drive transmits power and reduces the speed. Usually the owner (or manager in some cases) supervises the motor and the gas burner and an employee or member of the family feeds the maize into the mill and collects the charge, 1 centavo a kilo. In one case a woman occupied this post, but most of the mill operators are men.

Except for a few very poor families, everyone in Cherán now patronizes the mills. Each mill serves from about 330 to 360 customers a day.

467 *Wheat threshing.*—One wood-burning steam-driven threshing machine has operated in Cherán for several years. The machine is stationary (although it could be moved, it is too cumbersome to do so), and the customers bring their wheat to the machine. Two tenders, who feed the wheat into the machine, and a water carrier are required besides the operator. Firewood is purchased. Exclusive of interest on the investment and repairs, the operator nets about 25 pesos a day above operating expenses.

In 1940 a smaller gasoline-driven thresher, which could be moved from house to house, was said to have made considerable inroads on the trade. However, as the bulk of the Cherán wheat is still threshed by hand, there seemed to be ample business for both threshing machines.

338 *Painters and plasterers.*—This is a rare occupation followed by two or three men on a part-time basis. Only a minority of the houses of adobe or stone are plastered, and few of them are painted. The pay is fairly good, but the best worker probably does not put in more than 90 days' work a year. Brushes and stencils are used in painting.

933 *Masons.*—As the house owner normally provides all materials, the mason sells only his services. His equipment is a trowel, hammer, a board frame for holding mud mortar, a shovel for mixing mortar, an ax to cut poles for

243 The best wheatland produces about 2 *cargas*
453 of wheat per hectare; lands producing less than
1½ *cargas* are seldom cultivated. The wheat
must then be threshed before sale, and this will
cost \$2.50 a *carga* in the mill and about the
same if threshed by hand. The wheat will sell
at from \$22 to \$30 a *carga*, depending upon the
market (\$26 in 1941).

243 The return in cash, then, is between \$33
434 (1½ *cargas* at \$22) and \$60 (2 *cargas* at \$30).
The net profit in terms of our calculations would
vary between minus \$10.67 and plus \$15.08.
This figure does not count the labor of carrying
the wheat to the house and thence to the mill,
or winnowing; neither does it include the value
of the straw (used as feed). Again, however,
the Cherán farmer who received \$33 for his
year's work on a hectare would count himself
relatively fortunate.

243 The return from wheat is less than the poten-
434 tial return from maize cultivation on average
438 land. In general, however, wheat is usually
[491] grown on lands giving a poor maize yield.
Moreover, the demand for wheat appears to be
more stable, and in days when transport was
all on pack animals the greater value of wheat
per volume and weight made it much more
attractive as an export crop. The opening of
the highway may alter the situation, as it makes
bulk transportation of maize feasible. On the
other hand, the highway has opened up new
markets for wheat. Trucks from the large
[439] flour mill at Morelia now come to buy wheat in
Cherán and even penetrate to mountain villages
such as Pichataro. Consequently, a much
wider market is available than the regional
mills that could be reached in a day or a little
more with burros. Of course, similar expansion
of markets is available to maize growers
and producers of other products. It is still too
early to predict the effects of improved com-
munications on the agriculture of Cherán, but
some additional considerations are discussed in
connection with trade.

243 Another way of disposing of wheat is to sell
256 it at a flour mill in a Mexican town or convert
434 the wheat into flour and sell the flour. The
438 price paid at flour mills is about \$4 a *carga*
above the Cherán price. Mills charge an 18
percent discount if the farmer chooses to have
his wheat milled. This covers waste, had

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- 256 wheat, and the milling charge. A *carga* produces about 14 *arrobas*, or about 250 pounds
- 243 of flour, of which the mill takes $2\frac{1}{2}$ *arrobas*, or
- 434 $62\frac{1}{2}$ pounds. The farmer receives $187\frac{1}{2}$
- 438 pounds of flour. Either of these procedures involves the labor of transporting wheat to the mill and, in case the farmer has no burros, the rent of pack animals or trucking charges. Mills are at Jacona (regarded as the best), Purépero, Tanátaro, and Carapan.

Yet another way of disposing of wheat is to grind it at home or in a *nixtamal* mill and bake bread for sale in the market towns and at fiestas. Only relatively small quantities are used in this way.

- 245 One agricultural activity for which few data were obtained is fruit growing. No information was secured on yields of trees or on labor.
- 438 The main labor cost is harvesting, usually done
- 434 by the family at a time when there is little other agricultural activity. Fruit may be carried to markets, or it may be sold to traders.

- 434 Another view of farming activity may be gained by examining the income of individual
- 241 farmers. These data are probably somewhat
- 511 unreliable, for, as previously indicated, there is a tendency to minimize wealth and income. Table 2 summarizes the available information.

Case 1 is a school teacher with a small family who rents his land. Probably his share in good years supplies most of his family requirements of maize. Case 2 is a storekeeper who also rents his land. In years when his land lies fallow, he must have to buy a little

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281 *Comment:* The average daily return is an estimate,
434 based on the assumption the tanner is busy all the
time. The only full-time tanner buys hides, tans them
on his own account, and sells them outside the village
when he is not occupied with commissions. Con-
sequently, his income is probably fairly steady.

922 *Lacquer:*

434 Weekly income about \$5

Comment: Only one woman lacquer worker is found
in Cherán. Her entire output is sold locally. The
figure given is her estimate of her weekly income.
Some of the lacquer materials are fairly expensive and
the wooden trays used as a base must be purchased.
Probably net income is much less than \$5 weekly. The
main lacquer industry is in Uruapan and is mostly in
the hands of Mestizos.

256 *Bakers (commercial):*

433 *Cost of materials (per week):*

434 Flour, 1 arroba (25 pounds) \$3.50-\$3.62
Lard, 1 kilo 1.50
Sugar, 3 kilos 1.08

Total \$6.08-\$6.20

Labor:

No precise data; bakings per week,
usually 3

Sales:

Gross returns per week,
estimated \$10.00-\$12.00

Profits:

(Estimated after deducting any
rental costs for use of oven) .. \$3.80-\$5.92

Comment: Sustained sales at the reported levels
would produce slightly better than average wages.
Despite the lack of definite data on hours of labor, a
baker certainly works fewer hours and less strenuously
than a laborer. Much time is probably consumed in
selling; this may be done by a wife in the case of pro-
fessional male bakers. Selling time is not included in
the estimates. It should be remembered that a number
of women bake occasionally; some bake regularly for
the Sunday market in Paracho.

Bakers (home):

Aside from the professional baker of pan dulce
recently established in the village and from whom no
satisfactory information could be secured, there are a
number of women who bake bread. Salt rising bread
[435] (pan de sal) is sold at two for 5 and one for 5 centavos,
depending on size. If pan dulce is made, it sells at 1
centavo or at three for 5 centavos, depending on size.
In most cases the baker owns her oven, but in some
cases an oven is rented. The rental is usually one
[427] bread for each "board" (on which the bread is placed
to rise).

243 *Threshing machine:*

407

Equipment:

433

Woodburning steam-driven threshing machine.

434

Cost unknown, but probably several thousand pesos.

Charges for wheat threshing (a *carga*) . . . \$2.50Capacity daily 12 *cargas*

Income daily \$30.00

Operating expenses (daily):

Wood \$2.00

Hired labor 2.00

Water carrier 1.00

Total \$5.00

*Operating season (June 20 to Oct. 25,**period worked in 1940 estimated):**Days*

June 8

July 25

August 25

September 20

October 15

Total 93

Total business (1,116 *cargas*, estimated, at\$2.50 a *carga*) \$2,790

Net profit annually before deducting re-

pairs, wages for owner, interest and

depreciation, approximately \$2,365

Comment: Probably the threshing machine has the largest peso volume of business of any enterprise in Cherán, although one of the *nixtamal* mills probably is a close second. The threshing machine also represents the greatest capital investment except for some individual investments in real estate. High repair costs probably reduce the true net profit considerably, while depreciation in this case cannot be ignored. Add to this the time and skill required of the owner, and it is probable that this is not the most profitable enterprise in town even though it be the largest. Certainly, other families of farmers or combination farmers and storekeepers show more outward signs of prosperity.

402

Nixtamal mills:

433

Cost of equipment \$300.00-\$1200.00

434

Costs daily:

256

Gasoline and oil

for gas engines 2.00

Charcoal for producer gas

equipped engines 1.20

Labor, 1 man 80-1.00

Gross income at 1 centavo per

kilo of maize ground (daily) 13.00-15.00

Net income (daily) 10.00-12.00

Comment: Mills work only half time; i.e., by agreement only half the mills operate any one day, so net income should be halved. Even so, this gives a sizable income, but probably the life of the equipment is short. Cost of repairs and the replacement of grinding stones

256 (\$9 every few weeks) is also an item not included.
 402 Some engines are equipped to saw wood, when not
 433 driving mills; pine logs are cut in lengths suitable for
 434 splitting into box lumber. The blocks are shipped in
 trucks to Uruapan, where they are split to make crates
 for shipping fruit. No data on costs or sales were
 secured on this minor business.

Barbers:**Prices:****Haircuts:**

Weekdays	\$0.15
Sundays	.20
Shaves	<u>.10-.15</u>

Number of "jobs" daily:

Except Saturday	4-8
Saturday	<u>10-15</u>

Income (a week) \$6.00-\$7.50

Comment: Average income is probably under \$1.00 a day. One of the two full-time barbers (with the smallest income) supplements this by card playing. One barber works only on Sundays and makes shakes during the week.

Musicians:**Wages:**

For 2-day fiesta	\$10
For wedding	<u>2</u>

Number of engagements (individual cases):

(a) 6 fiestas, 15 weddings, in 9 months	90
(b) 5 fiestas, 5 weddings, period	
unknown	60
(c) 10 fiestas in 1 year	<u>100</u>

Comment: The musicians obviously do not make a living from music. All have other sources of income; some are farmers, storekeepers, barbers, etc.

Painters, plasterers:

Daily wage	\$1.75-2.50
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Comment: Painters and plasterers have only occasional demands for their skills. Only a few stone or adobe houses are plastered, and fewer still are painted. Most jobs are by contract.

Billiard parlors:

Equipment	\$1,500-\$1,700
Rent (monthly)	10-20
Charge per game	<u>.05</u>

Comment: No estimate of the amount of business was received. It is evident, though, that the enterprise is profitable, to judge by dress and other characteristics of the owners.

Butchers:

Prices paid for beeves on hoof	\$80-\$150
Prices reported paid at wholesale for beef weighing:	

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325 old smiths, who work at their trade only part time, represented the remnant of a once thriving home industry.

[437] The former source of metal for the San Felipe smiths is problematical. According to a local informant, during the 1880's "*planchas de hierro*" were brought in from Cotija, a muleteer and trade center having close connections with the *tierra caliente* and the Sierra de Guerrero. This information points to Coalcomán in the Sierra Madre del Sur of Guerrero as the principal source of iron. Other ironworking towns of Michoacán include Irimbo and Nahuatzen. Mestizos in the latter pueblo fashion knives and machetes.

STONECUTTING

324- Stonework among modern Tarascans is limited to approximately 12 metate makers in Turicuaró.
[438] Formerly this village was noted throughout Michoacán for the high-quality *metates* (*iauíá*), *manos* (*poiékuá*), and *molcajetes* (*áumatakua*) carved from a fine-grained andesite (*akápu amákiti*, or "good stone"), found near the summit of the composite volcano Kanákuaráni (Cerro de la Corona) nearby. Since the introduction (ca. 1925) of the engine-powered nixtamal mills in mestizo and larger indigenous towns, demand for new *metates* has sharply declined.¹⁴¹

Metates and *molcajetes* are roughly shaped at the quarry on Kanákuaráni and are carried down to the pueblo on burro for finishing in the stone-cutter's house. Stone is worked with steel tools, [412] e. g. the pick (*píkua*) and sledge hammer (*píkua-k'éri*), and is finished with a polishing stone (*janámu*). Several sizes of *metates* are made and sold to traveling merchants who pass through the town.

TRADE AND TRANSPORT

438 The structure of trade among the Tarascans is
441 not dissimilar to that of most Indian groups of central Mexico. Although every settlement has at least one store where general merchandise can be purchased, most trading is done at the *tianguis*, or market, held regularly in the larger towns. Throughout the area professional traders—*huacaleros* (who carry merchandise on their backs), *arrieros* (who haul products on the backs of burros), and lately, wholesale buyers from the

¹⁴¹ According to local informants, in 1913 practically every family in the village made *metates*. Since that time most of the villagers have turned to woodwork (mainly *baños*).